



1850 M Street, N.W., 11th Floor  
Washington, D.C. 20036  
Telephone: (202) 828-7452

*Richard D. Lawson*  
Director  
Federal Regulatory Relations  
United Telephone Companies

June 5, 1992

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JUN - 5 1992

Federal Communications Commission  
Office of the Secretary

Ms. Donna R. Searcy  
Secretary  
Federal Communications Commission  
1919 M Street, N.W.  
Room 222  
Washington, D.C. 20554

RE: In the Matter of Redevelopment of Spectrum to Encourage Innovation in the Use of New  
Telecommunications Technologies, ET Docket No. 92-9

Dear Ms. Searcy,

Attached are the original and four copies of the Comments of the United Telephone  
Companies in the proceeding referenced above.

Sincerely,

Richard D. Lawson  
Director  
Federal Regulatory Relations

Attachments

RDL/mlm

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Before the  
**FEDERAL COMMUNICATIONS COMMISSION**  
Washington, D.C. 20554

Federal Communications Commission  
Office of the Secretary

In the Matter of )  
Redevelopment of Spectrum to ) ET Docket No. 92-9  
Encourage Innovation in the )  
Use of New Telecommunications )  
Technologies )

**COMMENTS OF THE UNITED TELEPHONE COMPANIES**

Respectfully submitted,

UNITED TELEPHONE COMPANIES

Jay C. Keithley  
1850 M Street N.W.  
Suite 1100  
Washington, DC 20036  
(202) 857-1030

W. Richard Morris  
P. O. Box 11315  
Kansas City, MO 64112  
(913) 624-3096

Their Attorneys

June 5, 1992

## **SUMMARY**

The Commission proposal to allocate spectrum in the 2 GHz range to new services utilizing emerging technology should be adopted. However, a fixed, arbitrary, transition period after which incumbent users of that spectrum would be subject to being arbitrarily ousted should not occur.

United proposes that incumbent users of 2 GHz spectrum continue to receive co-primary status for existing and expansion systems. Incumbent users should not be required to relocate to alternate spectrum or media unless emerging technology service providers cannot operate effectively because of their co-primary status and a lack of unused spectrum. In addition, incumbents should retain co-primary status if suitable alternative spectrum or an alternative media will not provide technically acceptable alternatives.

Emerging technology service providers should be free to negotiate mutually acceptable relocation agreements with incumbent users. Relocation proposals should cover all costs of the incumbent but should not result in a windfall profit to incumbents.

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**COMMENTS OF THE UNITED TELEPHONE COMPANIES**

The United Telephone companies<sup>1</sup> ("United") hereby submit their comments in the above captioned Notice of Proposed Rule-making.<sup>2</sup> The Commission has correctly concluded that "technological advancements in digital and signal processing systems have opened possibilities for the development of a broad range of new radio communication services."<sup>3</sup> However, the "current lack of available spectrum tends to have a chilling effect on the

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1. Carolina Telephone and Telegraph Company; United Telephone Company of Southcentral Kansas; United Telephone Company of the Carolinas; United Telephone Company of Florida; United Telephone Company of Indiana, Inc.; United Telephone Company of Eastern Kansas; United Telephone Company of Kansas; United Telephone Company of Minnesota; United Telephone Company of Missouri; United Telephone Company of New Jersey, Inc.; United Telephone Company of the Northwest; United Telephone Company of Ohio; United Telephone Company of Pennsylvania; United Telephone - Southeast, Inc.; United Telephone Company of Texas, Inc.; and United Telephone Company of the West.

2. In the Matter of Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, Notice of Proposed Rulemaking, ET Docket No. 92-9, Released February 7, 1992 ("NPRM").

3. Id. at para. 4.

incentives for manufacturers and financial institutions"<sup>4</sup> to fund research and equipment development aimed at providing new radio-based services that will be of value to customers. As long as sufficient spectrum to provide new radio-based services is unavailable, these services will not materialize in the United States.

United supports the Commission in its goal of establishing "new areas of the spectrum to be used for emerging telecommunications technologies."<sup>5</sup> In the NPRM the Commission proposes to designate 220 MHz of spectrum between 1.85 and 2.20 GHz as a spectrum allocation primarily for emerging technologies. This spectrum allocation should occur as proposed.

#### **I. SUITABILITY OF SPECTRUM RANGE**

United believes that spectrum allocation in the 2 GHz range is appropriate. United's analysis indicates that radio frequency propagation characteristics in this spectrum range provide the correct characteristics for the development of emerging telecommunications technologies, such as personal communications services ("PCS"), at favorable cost points. United expects that once a spectrum allocation is made, manufacturers and financiers will fund development of hardware that can be produced at a low

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4. Id. at para. 7.

5. Id. at para. 1.

enough cost to attract sufficient users to make services provided through emerging technologies successful.

The Commission, however, should not assume that the proposed 220 MHz of spectrum will be sufficient to meet the long-term spectrum needs of services utilizing emerging technologies. The Commission indicated that it already has requests for 376 MHz of spectrum for use by services currently contemplated employing emerging technology.<sup>6</sup> While the 220 MHz of spectrum that the Commission proposes to dedicate to emerging technologies will probably prove adequate in the short-term, additional spectrum will likely be needed in the long-term for use in providing new services.

United agrees with the Commission that frequencies above 3 GHz are not suitable for emerging mobile and portable technologies because the high frequency electronic components that are expected to be key to new service development are not expected to be economically feasible for use above 3 GHz.<sup>7</sup>

Spectrum below the 1 GHz range is so congested from use by broadcast and land mobile service providers that relocation of incumbents would prove overly expensive when compared to relocation alternatives in the 2 GHz range. The Commission recognizes that the 1.85 - 2.20 GHz band currently used for fixed

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6. Id. at para. 4.

7. Id. at para. 12.

private and carrier microwave, public land mobile service, broadcast auxiliary operators and multipoint distribution service holds the most promise for reasonable cost relocation of incumbents on either alternative transmission media or other spectrum. United agrees with this assessment.

While United agrees with the Commission that the proposed allocation of non-government spectrum is appropriate, the Commission should also evaluate the current government allocation to determine whether additional spectrum is available, or could be made available, to meet expected spectrum demand by services using emerging technology. If additional spectrum could be made available from the government allocation, the long-term need for more spectrum to support emerging technologies could be met from that pool.

United specifically suggests that the Commission consider the availability of government spectrum, on an exception basis, in the 1.71 - 1.85 GHz band as both a spectrum range to which current public safety and local government fixed microwave users could migrate and, as an additional spectrum allocation for emerging technologies and private microwave.

## **II. SPECTRUM ASSIGNMENT TRANSITION PLAN PROBLEMS**

United is an incumbent user of carrier point-to-point microwave in the 2 GHz band. The Commission, in its spectrum alloca-



tion proposal, suggests that United and other users of spectrum proposed for allocation to emerging technology relocate to either other spectrum or other media.

United generally supports a 2 GHz band clearing proposal but believes that more reliance should be placed on mutually acceptable relocation agreement between the parties. Thus, United does not support the requirement that current 2 GHz users, at the end of a 15 year transition period, automatically be required to cease operation if they fail to eliminate interference with new service operators. Thus, new service providers should not have absolute rights to all of the 2 GHz spectrum after some arbitrary transition period.<sup>8</sup>

The Commission's study dealing with spectrum allocation, ("OET Study") indicates that approximately one-half of all 2 GHz links are licensed outside the top 50 MSAs.<sup>9</sup> In these non-MSA rural areas it is unlikely, in United's opinion, that emerging technology-based new services will actually require the relocation of existing users in the foreseeable future. Thus, rather than granting an automatic right to new service providers to arbitrarily oust spectrum users, a showing that open spectrum is not available should be required. Additionally, United believes that existing users should be absolutely protected against forced

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8. United also supports the continued designation of spectrum used by public safety and local government as co-primary on a continuing basis.

9. "Creating New Technology Bands for Emerging Telecommunications Technology," FCC/GET TS92-1 (January, 1992) at 34.

relocation when suitable relocation alternatives do not exist and additionally protected by appropriate dispute resolution practices.

United asserts that automatic downgrading to secondary status of any new applications by current users to expand service in the 2 GHz band is not appropriate. Rather, co-primary status of incumbents, for existing and expansion systems should be granted, subject to mutually agreeable relocation.

If the Commission grants only secondary status to expansion requests by incumbents, significant risk is created that they may be required to cease operations before newly placed equipment is depreciated, and long before the useful life of the equipment is exhausted. This risk of economic loss will chill the placement of new equipment to utilize currently available spectrum. Leaving this available spectrum underutilized is wasteful. Rather than chilling the incentive to use the 2 GHz spectrum efficiently during the foreseeable future, the Commission should encourage the continued efficient use of the spectrum by allowing co-primary status to incumbents for existing and expansion systems.

### **III. NEGOTIATED RELOCATION PROPOSAL**

United proposes the adoption of a co-primary guarantee, with the understanding that mutually agreeable relocation of existing users is encouraged. Negotiated relocation agreements would

provide the incumbent the ability to recover the cost of installed systems and encourage continued efficient use of the spectrum during the transition. Protection against absolute relocation requirements, when acceptable alternative arrangements do not exist, should also be provided.

In some cases emerging technology users may not function effectively because of their co-primary status and a lack of adequate unused 2 GHz spectrum. In these cases, the emerging technology service providers should be free to negotiate voluntary relocation plans with incumbent users.

A relocation proposal by either the user of emerging technology, or a joint plan devised by the incumbent and the new service provider, should include engineering specifications detailing proposed modifications to the current system or relocation to other facilities. A discussion of the available options and reasons for selecting the offered proposal should be included. Proposals should contain cost estimates of the relocation; details on availability of zoning, easement, and suitable sites; construction time frames; and identification of required regulatory approvals. The incumbent would be expected to assist in this process through the provision of traffic load data, net book cost of existing systems and depreciation data, in addition to providing input concerning what type of system would

best fit with the incumbent's future network plans. The process of negotiating a mutually agreeable relocation plan could include counter proposals by the incumbent.

If the parties fail to agree on a relocation plan, and if satisfactory alternative facilities are available, an arbitration approach using mutually acceptable outside experts should be used. Appeals from this process, with an appropriate showing that existing spectrum is unavailable, and that satisfactory alternatives are available, should be heard by the Commission.

The Commission has noted that "market-based negotiations could possibly result in windfalls for the incumbent 2 GHz licenses"<sup>10</sup> as a result of payments for voluntary relocation. United supports a relocation process that ensures recovery of the actual costs incurred for equipment, engineering, training, test equipment, tower alterations, license, frequency coordination, and other costs. Windfalls, based on spectrum scarcity and its underlying value, should not go to the incumbent.

The need to prevent windfalls is a matter of equity for the emerging technology service provider. If windfalls were allowed, it is likely that only those parties with pockets deep enough to buy spectrum at speculative market value would be financially able to enter the market. Smaller providers, regardless of the

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10. NPRM at 18, FN 20.

merit of their proposed spectrum use, may lack the resources to compete in such a spectrum bidding war.

The Commission should encourage voluntary relocation while discouraging windfalls for incumbents. Unearned windfalls, based on the value of the publicly owned spectrum asset, are inappropriate.

#### **IV. IMPACTS OF RELOCATING FIXED MICROWAVE ABOVE 3 GHz**

United also believes that the relocation of current fixed microwave operations to the bands above 3 GHz is technically feasible and provides the best alternative in clearing adequate spectrum in the 2 GHz band for emerging technology services. However, it is unclear in the NPRM whether the existing separation between common and private carriers would remain upon the transition of current 2 GHz users to higher bands. Due to differences in technical specifications, the current separation should be maintained to prevent unnecessary complexity in relocation and ongoing operations.

It is imperative that spectrum be utilized efficiently as a result of the changes created by the NPRM. Thus, it will be necessary for the Commission to determine if a loading waiver is necessary due to differences in bandwidth that exist between current 2 GHz applications and higher frequency bands. The Commission should rechannelize a portion of the upper bands to make

narrow band channels available. This will facilitate the relocation to higher bands, while simultaneously maintaining the efficient use of spectrum resources by all parties.

To further improve spectrum utilization, minimum path length specifications in the higher bands should be retained. As suggested in the NPRM, this would require that the shorter path lengths, less than 10 miles, relocate to bands above 10 GHz. This stipulation will not only prevent unnecessary congestion of the 4 and 6 GHz bands, but will also signal to manufacturers that such equipment is necessary and should be manufactured in quantity.

#### **CONCLUSION**

United supports the development of new services using emerging technology. Allocation of spectrum in the 2 GHz range for use by new services using emerging technology is appropriate. In its drive to free sufficient spectrum in the 2 GHz range, the Commission must protect incumbent users that lack adequate alternatives for relocation. Voluntary relocation should be encouraged, but needless relocation should be avoided. While those

that are relocated should not suffer an economic loss, relocation should not result in windfall profits.

Respectfully submitted,

UNITED TELEPHONE COMPANIES

By Jay C. Keithley by (RDQ)  
Jay C. Keithley  
1850 M Street N.W.  
Suite 1100  
Washington, DC 20036  
(202) 857-1030

W. Richard Morris  
P. O. Box 11315  
Kansas City, MO 64112  
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